

# **Globally Significant Plants in Southeastern Big Horn and Southwestern Rosebud Counties, Montana**

Prepared for:

The Bureau of Land Management

By:

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Montana Natural Heritage Program  
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Prepared for:  
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## Executive Summary

In 2001 and 2002, botanists for the Montana Natural Heritage Program (MTNHP) conducted field surveys to locate *Astragalus barrii* (Barr's milkvetch) and *Physaria didymocarpa* var. *lanata* (woolly twinpod) in southeastern Big Horn County and southwestern Rosebud County. Both of these species are regional endemics, their overall range being restricted to portions of adjacent Montana, Wyoming and South Dakota. *A. barrii* is ranked G3 S2S3 (vulnerable at both global and state levels) by the Natural Heritage Network (Heidel 2001) and is recognized as a Watch Species by the BLM Montana Office. *P. didymocarpa* var. *lanata* is ranked G5T2 S1 (indicating the variety is vulnerable at both global and state levels) by the Natural Heritage Network and has not yet been designated as a Sensitive or Watch Species by the BLM Montana Office.

Previous to this study, both *A. barrii* and *P. didymocarpa* var. *lanata* were known to occur within the area but had not been systematically inventoried. *P. didymocarpa* var. *lanata* was known in Montana from only one location in Big Horn County and had been documented from 14 occurrences in north-central Wyoming. *A. barrii* had previously been documented from 33 locations in southeastern Montana, only two of those in southeastern Big Horn and southwestern Rosebud counties.

We identified potential habitat for *Astragalus barrii* and *Physaria didymocarpa* var. *lanata* prior to beginning fieldwork, using USGS topo-

graphic maps, soil data (Soil Survey 1996) and information in the MTNHP databases. Surveys were conducted mainly on larger blocks of public land where appropriate habitat was identified, and included a total of 25 survey routes.

These surveys resulted in discovery of four new occurrences of *P. didymocarpa* var. *lanata* and three new occurrences of *A. barrii*. In addition, two new locations were found for another globally significant Species of Concern, *Lomatium nuttallii* (Nuttall's desert-parsley). This species is a regional endemic, presently ranked G3 S1, and was previously known in Montana from one 1980 collection in Big Horn County. This species is designated as a Watch Species by the BLM in Montana (BLM 1996).

These surveys generated significant new information on the distribution and habitat of globally significant plant species in this area, particularly for *P. didymocarpa* var. *lanata* and *L. nuttallii*, both of which had only one known occurrence in Montana prior to 2001. The fact that our surveys were often unsuccessful in areas of apparently suitable habitat reinforces that these species are uncommon to rare, and do not occur predictably and regularly in apparently suitable habitat. However, given the relatively small proportion of potential habitat that we surveyed, additional populations likely exist for all three species in unsurveyed areas of suitable habitat scattered throughout the region.

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